

REMARKS

These remarks and the accompanying amendments are responsive to the Office Action dated April 4, 2006 (hereinafter the "Office Action"), having a shortened statutory period that expires July 5, 2006. At the time of the last examination, Claims 7-10 were pending, of which Claims 7 and 9 are independent claims, and Claims 8 and 10 are corresponding dependent claims.

The Office Action rejects Claims 7-10 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 6,097,700 issued to Thornberg et al. (hereinafter "Thornberg") in view of United States patent number 5,351,245 issued to Pregont et al. (hereinafter "Pregont"). Regarding this rejection, the Office Action makes three assertions that will be hereinafter referred to as "Assertion A", "Assertion B" and "Assertion C".

For instance, the following passage will be referred to as "Assertion A" as follows:

Thornberg et al disclose a means for forming logical channels and a means for mapping the logical channel to a physical channel and a means for transmitting the logical channel signals over the physical channel. See Fig. 2 and col. 4, lines 64-66.

Following this Assertion A, the Office Action sets forth the following passage referred to hereinafter as "Assertion B":

First, Thornberg et al does not describe the structure of the logical channel with respect to the error correction code added to data in the channel. Pregont teaches generating the signal of the logical channel by adding an error correcting code, specifically CRC, on a unit by unit basis. See Fig. 3A illustrating CRC coding. Thus, it is obvious to compute and add an error correction code such as CRC to the dat[a] [sic] carried in the logical channel for error correcting purposes the receiver.

Following this Assertion B, the Office Action sets forth the following passage referred to hereinafter as "Assertion C":

Second, Thornberg et al fails to teach that the number of radio frames of a fixed duration increases the transmission rate of the physical channel decreases. Thornberg et al teaches that one of the logical channels has 10 ms slots, i.e., "radio frames." Since the same amount of information must be transmitted, it would have been obvious to one skilled in the art increase the number of time slots when the transmission rate is lowered in order to ensure the same amount of data to be transmitted regardless of a lowered rate.

As an initial matter, Applicants wish to show that the assertions made above are based on an apparent misinterpretation of Thornberg. For instance, Assertion C states that "Thornberg et al teaches that one of the logical channels has 10 ms slots". However, the channel having 10 ms slots in Thornberg et al is a physical channel rather than a logical channel. Column 4, lines 54-55 of Thornberg states "The PRCH is structured in ten ms time slots to convey fragmented packets". However, this does not mean that the PRCH (logical channel) has ten ms time slots. Rather, this means that the physical channels PDCH and PCCH onto which the logical channel PRCH is mapped and over which packets are transmitted, have ten ms time slots (please see column 4, lines 62-67 of Thornberg for support of this position). Thus, the Office Action's conclusion that Claims 7-10 are unpatentable is based upon a misinterpretation of Thornberg, and is thus that conclusion is not supported.

Having said this, this response will now compare the scope of the recited claims with Thornberg. Independent Claims 7 and 9 recite "mapping [a] logical channel into a physical channel such that a number of radio frames of a fixed duration on the physical channel into which each logical channel unit" ("each of which [being] subject[] to error detection" and "including ... an [added] error detecting code") "is mapped increases as a transmission rate of the physical channel decreases".

The Office Action only refers to Figure 2 and column 4, lines 64-66 of Thornberg in supporting the 35 U.S.C. 103(a) rejection. However, Figure 2 and column 4, lines 64-66 only describe that the logical channel PRCH is mapped onto two physical channels comprising a physical data channel (PDCH) and a physical control channel (PCCH). Thus, Thornberg does not teach or suggest “mapping [a] logical channel into a physical channel such that a number of radio frames of a fixed duration on the physical channel into which each logical channel unit is mapped **increases** as a transmission rate of the physical channel decreases” (emphasis added) as recited in independent Claims 7 and 9. The remaining part of Thornberg also does not disclose this recited feature.

Even if one were to combine Thornberg and Pregont¹ (the appropriateness of the combination not being conceded), the combination would not teach or suggest all of the recited features of any of the independent Claims 7 and 9. That is, in Pregont, when the transmission rate of the physical channel is changed from the full rate to the half rate, it uses every other frame that it would use on the full rate channel as shown in the attached reference figure (please see Exhibit A along with column 3, lines 32-34 of Pregont). In this case, even though the transmission rate of the physical channel decreases from the full rate to the half rate, the number of the time slots on the physical channel into which each logical channel unit (RCH unit to which a CRC is added) is mapped remains two.

Thus, first, it cannot be said that it would have been obvious to one skilled in the art to increase the number of time slots when the transmission rate is lowered in order to ensure the same amount of data to be transmitted regardless of a lowered rate. Second, even if Thornberg

¹ Since even the combination of Thornberg and Pregont do not teach or suggest all of the recited features of any of the independent claims, it is not necessary to argue against this combination in order to support the withdrawal of the rejection. Accordingly, the lack of arguments herein against the appropriateness of this combination should not be viewed as acquiescence that the combination is appropriate.

and Pregont are combined, it only results in the transmission being conducted as shown in the attached Exhibit A with the time of a single frame being 10 ms.

Here, it is clear that the combination of Thornberg and Pregont does not disclose the above-mentioned feature of Claims 7 and 9 of "mapping [a] logical channel into a physical channel such that a number of radio frames of a fixed duration on the physical channel into which each logical channel unit" ("each of which [being] subject[] to error detection" and "including ... an [added] error detecting code") "is mapped increases as a transmission rate of the physical channel decreases". This is because, in the combination of Thornberg and Pregont, the number of time slots on the physical channel into which each logical channel unit (RCH unit) is mapped does not increase (remains two) as a transmission rate of the physical channel decreases (from full rate to half rate).

Thus, even the combination of Thornberg and Pregont, one does not arrive at the recited features of any of independent Claims 7 and 9. Therefore, Claims 7 and 9 are not unpatentable over Thornberg in view of Pregont. Claims 8 and 10, which depend from Claims 7 and 9, respectively, are also thus not unpatentable over the combination for at least the reasons provided for Claims 7 and 9. Accordingly, the 35 U.S.C. 103(a) rejection should be withdrawn.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 29th day of June, 2006.

Respectfully submitted,

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